

1 **51055/KMO/W112**

WHAT IS CLAIMED IS:

1. A catheter comprising:
 - 5 an elongated catheter body having a proximal end, a distal end and a lumen extending longitudinally therethrough;
 a control handle attached to the proximal end of the catheter body, the control handle including first and second members that are moveable relative to each other, the second member being attached to the catheter body;
 - 10 an inner member slidably mounted in the lumen of the catheter body, the inner member comprising an elongated stiffening member, having proximal and distal ends, that is surrounded by and connected to a non-conductive covering having a free distal end on which is mounted one or more electrodes, wherein the proximal end of the inner member is attached to the first member of the control handle, wherein longitudinal movement of the first member relative to the second member results in longitudinal movement of the inner member relative to the catheter body to cause the inner member to extend out of and retract into the catheter body.
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2. The catheter of claim 1, further comprising means for deflecting the distal end
20 of the inner member.
3. The catheter of claim 1, further comprising a puller wire extending through the catheter body and inner member, the puller wire having a distal end anchored at or near the distal end of the non-conductive cover and a proximal end anchored to a third member of the control handle, the third member being moveable relative to the second member so that
25 movement of the third member relative to the second member results in longitudinal movement of the puller wire relative to the catheter body to thereby deflect the distal end of the inner member.
- 30 4. The catheter of claim 1, wherein an atraumatic tip is provided at the distal end of the non-conductive cover.
- 35 5. The catheter of claim 1, wherein a plastic cap is mounted at the distal end of the non-conductive cover.

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6. The catheter of claim 1, wherein the inner member carries from 2 to about 20
ring electrodes along its length.

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7. The catheter of claim 1, wherein the inner member carries from 3 to about 15
ring electrodes along its length.

8. The catheter of claim 1, further comprising one or more electrodes mounted at
10 or near the distal end of the catheter body.

9. The catheter of claim 1, wherein the inner member further comprises at least
one location sensor.

10. The catheter of claim 1, wherein the inner member is moveable between a
fully retracted position, wherein the entire inner member is contained within the lumen of the
catheter body, and a fully extended position, wherein all of the one or more electrodes on the
inner member are positioned beyond the distal end of the catheter body.

11. The catheter of claim 10, wherein the inner member, wherein in the fully
extended position, has an exposed length ranging from about 10 mm to about 200 mm.

12. The catheter of claim 1, wherein the lumen is coaxial with the catheter body.

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